

DETAILED ACTION

This office action is responsive to amendment filed 06/05/2009. Claims 1, 11, 20, 29 and 31 are currently amended. Claims 1-5, 7-14, 16-24 and 26-31 remain pending.

Response to Arguments

Applicant's arguments filed 06/05/2009 have been fully considered but they are not persuasive.

Response to with respect to claim 1 (Similar responses can be applied to other independent claims.)

Possible claim amendment towards allowance had been discussed between July 14 and July 31, 2009 via both phone and e-mail. Multiple issues with the claim language had been brought up and require further clarification as follows.

(1) What are the paragraphs that support “using said connection-oriented signalling channel to transmit a session initiation request from the push proxy gateway to the mobile station”? The closest paragraphs may be [0026]-[0028], where a USSD request is transmitted to the mobile station via said connection-oriented signalling channel from HLR, not the PPG, and the connection between PPG and HLR is not given and it is not the said connection-oriented signalling channel.

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(2) What paragraphs support “the session initiation request being such that the mobile station activates a bearer for establishing a push session towards the push proxy gateway in response to the session initiation request”? In [0027], the paragraph recites “the mobile station receives the USSD request and responds by activating an appropriate bearer for establishing a PDP Context.”

How does one identify “a PDP Context” with “a push session towards the push proxy gateway”? Claim 1 may incorporate claim 9 to clarify the claim language and intended usage in (2).

(3) The meaning of “the connection-oriented signalling channel comprises a channel for transmitting Unstructured Supplementary Service Data (USSD)” is not clear. The claim language does not indicate such a USSD is necessarily used during the PUSH establishment; it does not directly associate a USSD with transmitting the session initiation request in other limitations. Suggestion: the “session initiation request” may be incorporated into the limitation to clarify the usage.

(4) What is a “need” or a “session initiation request” signal? Neither one is specified in the claim. Both a “need” and a “session initiation request” can be a SIR, or an arbitrary signal of the same format. As discussed in the previous office action, a “need” and a “session initiation request” must be distinguishably different; otherwise, reference Over The Air over HTTP reads on the limitations. A “need” signal may be a combination of different signals and a “session initiation request” can be a SIR or a USSD session

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request as described in [0022] and [0027] of the specification. However, the specification is not a measure of the invention. The claim must be given the broadest interpretation during the patent examination.

In the office action, a “need” and a “session initiation request” are regarded as signals of the same format (e.g., a SIR). The term “transmitting Unstructured Supplementary Service Data (USSD)” is construed as a USSD that supports transmitting information over a connection-oriented signaling channel, a property of GSSD known to one skilled in the art (References: e.g., GSM Recommendation 02.90, GSM 03.90, <http://www.mobilein.com/ussd.htm>, or WAP Over GSM USSD that provides USSD attributes).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3-4, 6-8, 10-12, 14-20, 23, 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over WAP Push Architectural Overview (WAP-250-PUSHARCHOverview-20010703-p), hereinafter **PUSHARCH**, in view of Lewontin (US 20050071419 A1), hereinafter **Lewontin**, in view of “Over The Air over HTTP”

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(<http://www.google.com/search?q=cache:BxSAsVsQtLkJ:ccmc.knu.ac.kr/files/seminar/2002_winter/push_framework/push_framework5.ppt+SIR+connection-oriented&hl=en&ct=clnk&cd=5&gl=us,2002>), hereinafter **OTAHTTP**, further in view of WAP Over GSM USSD (WAP-204-WAPOverGSMUSSD-20010730-a), and hereinafter **WAPU**. PUSHARCH and WAPU are cited by applicants in IDS on 10/28/2004.

2. With respect to Claim 1, PUSHARCH discloses a method for initiating a Wireless Access Protocol (WAP) push session to push information from a push proxy gateway to a mobile station in a wireless communication network (**PUSHARCH**: section 1, the 2nd paragraph describes a mobile device which can be a mobile station with definitions of push proxy gateway and push session in section 3.2; section 6.3, lines 1-3 describes initiation), the method comprising:

the session initiation request being such that said mobile station activates a bearer (**PUSHARCH**: section 8.3, the 1st paragraph, lines 3-4, "... activating the appropriate bearer ...") for establishing a push session in response to the initiation request towards the push proxy gateway in response to the session initiation request (**PUSHARCH**: Fig 5 shows a push session between the mobile and PPG); the push proxy gateway pushing information to the mobile station using the activated bearer (**PUSHARCH**: section 8.3, the 2nd paragraph, "Upon reception of the SIR, the client activates the bearer ..." describes the push session using the activated bearer); and discloses "wherein the connection-oriented signaling channel comprises a channel for transmitting messages" (**PUSHARCH**: section 10, lines 2-4).

PUSHARCH does not expressly disclose “in response to a need to push information from a push proxy gateway to a mobile station, establishing a connection-oriented signalling channel between the network and the mobile station” and “wherein the connection-oriented signalling channel comprises a channel for transmitting Unstructured Supplementary Service Data (USSD)”. In the same field of endeavor, Lewontin disclose in response to a need to push information from a push proxy gateway to a mobile station, establishing a connection-oriented signalling channel between the network and the mobile station (**Lewontin**: [0040], describes establishing the connection oriented push from PPG in response to an initiation signal, i.e., a need, generated from the push initiator 212 of Fig 2). In PUSHARCH, SIR, used in connection oriented push, instructs the client to establish a session with the PPG. It would have been obvious for one skilled in the art at time of invention to incorporate the teachings of Lewontin with PUSHARCH by establishing the connection-oriented signalling channel, as taught by Lewontin, because such a channel would provide time efficient transmission for SIR and further connection-oriented push messages.

The combined teachings of PUSHARCH and Lewontin do not disclose “using said connection-oriented signalling channel to transmit a session initiation request from the push proxy to the mobile station”. However, OTAHTTP discloses “using said connection-oriented signalling channel to transmit a session initiation request from the push proxy to the mobile station” (**OTAHTTP**: slide 4, the last bullet, “PPG sends an SIR ... by using connection-oriented push if applicable”, wherein SIR may be the request and a “terminal” is an example of the mobile station). PUSHARCH does not expressly

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exclude the transmission of SIR via connection oriented mode of the push operations (**PUSHARCH**: section 8.3, the 3rd paragraph, line 1, "... the SIR is typically sent ..."). It would have been obvious for one skilled in the art to combine OTAHTTP with **PUSHARCH**, in view of Lewontin, by incorporating the connection-oriented initial request transmission in order to provide WAP push initiation independent of the mobile station information available to PPG.

The combined teachings of **PUSHARCH**, Lewontin and OTAHTTP do not disclose "transmitting Unstructured Supplementary Service Data (USSD)". WAPU, however discloses "transmitting Unstructured Supplementary Service Data (USSD)" (e.g., **WAPU**: section 5.1, lines 4-9 of the 3rd paragraph). Nonetheless, USSD is a well-known bearer service that supports the WAP data traffic. It would have been obvious for one skilled in the art at the time of invention to combine the teachings of WAPU with **PUSHARCH** by including bearer services, such as USSD, in order to avoid the store-and-forward procedures and provide the capability for delivering high speed real-time services.

3. With respect to claim 11, the claim is substantially the same as claim 1 and therefore, it is rejected for the same reason as in claim 1 above.

4. With respect to claim 30, the claim is substantially the same as claim 1 and therefore, it is rejected for the same reason as in claim 1 above.

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5. With respect to claims 3 and 18, Lewontin discloses a session oriented mechanism (**Lewontin**: [0040], lines 6-9 describes establishing the connection oriented push). OTAHTTP discloses wherein the connection-oriented signalling channel transmits the initiation request using a session. (**OTAHTTP**: slide 4, bullet 3, indicates request, such as “SIR”, may be transmitted via connection-oriented push session).

6. With respect to claims 4 and 14, PUSHARCH teaches wherein the initiation request comprises an identification of the bearer for activating to support the establishing of the push session (**PUSHARCH**: section 8.3, the 2nd and the 3rd paragraphs, and section 9.1, line 1 of the 2nd paragraph, described activating the bearer to support the establishing of the push session).

7. With respect to claims 7 and 16, PUSHARCH discloses wherein the initiation request conforms to a WAP protocol for Service Initiation Requests (SIRs) (**PUSHARCH**: section 6.1, including parsing of push content and addressing).

8. With respect to claims 8 and 17, the claims are rejected for the same reason as claim 6, 15 and 25 above. In addition, WAPU discloses wherein the initiation request conforms to a USSD protocol for Unstructured Supplementary Service Requests (USSRs) (**WAPU**: sections 5.3.2.1 and 5.3.2.2 describe a USSD protocol where responses, viewed as USSR messages, are generated with respect to USSD requests.)

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9. With respect to claim 10, PUSHARCH discloses receiving the initiation request from the push proxy gateway (**PUSHARCH**: section 8.3, line 3 of the 1st paragraph

10. With respect to claim 19, PUSHARCH discloses providing the initiation request to a Session Initiation Application of the mobile station, the application adapted in accordance with a WAP protocol for initiating a push session (**PUSHARCH**: section 8.3, lines 3-4 of the 1st paragraph and line 1 of the 2nd paragraph).

11. With respect to claim 20, PUSHARCH discloses a method for initiating a Wireless Access Protocol (WAP) push session in a push proxy gateway adapted to push information to a mobile station in a wireless communication network

(**PUSHARCH**: Figure 5) comprising:

communicating with said mobile station in order to activate a bearer (**PUSHARCH**: section 8.3, 1st paragraph, lines 3-4, "... activating the appropriate bearer ...") for establishing a push session in response to the initiation request towards the push proxy gateway to permit the push proxy gateway to push information to the mobile station using said activated bearer (**PUSHARCH**: section 8.3, the 2nd paragraph, "Upon reception of the SIR, the client activates the bearer ..." describes the push session using the activated bearer) , and "in order to activate a bearer for establishing a push session towards the push proxy gateway in response to the session initiation request to permit the push proxy gateway to push information to the mobile station using said activated bearer" (**PUSHARCH**: section 8.3, Par 1, "... activating the appropriate bearer

...” implies the activation, Fig 5 shows a push session between the mobile and PPG, or Sec 8.3, Par 2, “activates the bearer indicated in the SIR and establishes a WAP session towards the indicated PPG over that bearer” implies the using).

PUSHARCH does not expressly disclose “in response to a need to push information from a push proxy gateway to the mobile station” and “transmitting a session initiation request to a network node of the wireless communication network for delivery to the mobile station by establishing a connection-oriented signalling channel between the network and the mobile station”. Lewontin, however discloses “in response to a need to push information from a push proxy gateway to the mobile station” (**Lewontin**: [0040], describes establishing the connection oriented push from PPG in response to an initiation signal, i.e., a need, generated from the push initiator 212 of Fig 2), and “transmitting an initiation request to a network node of the wireless communication network for delivery to the mobile station by establishing a connection-oriented signalling channel between the network and the mobile station” (**Lewontin**: [0040], lines 6-9 describes establishing the connection oriented push). In PUSHARCH, SIR, used in connection oriented push, instructs the client to establish a session with the PPG. It would have been obvious for one skilled in the art at time of invention to incorporate the teachings of Lewontin with PUSHARCH by establishing the connection-oriented signalling channel, as taught by Lewontin, because such a channel would provide time efficient transmission for SIR and further connection-oriented push messages.

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The combined teachings of PUSHARCH and Lewontin do not disclose “using said connection-oriented signalling channel to transmit said session initiation request from the push proxy gateway to the mobile station and communicating with said mobile station”. However, OTAHTTP discloses “using said connection-oriented signalling channel to transmit said session initiation request from the push proxy gateway to the mobile station and communicating with said mobile station” (**OTAHTTP**: slide 4, last bullet, “PPG sends an SIR ... by using connection-oriented push if applicable”, wherein SIR may be the request, where a terminal implies a mobile station).

PUSHARCH implicitly teaches or does not exclude the transmission of SIR via connection oriented mode of the push operations (**PUSHARCH**: section 8.3, the 3rd paragraph, line 1, “... the SIR is typically sent ...”). It would have been obvious for one skilled in the art to combine OTAHTTP with PUSHARCH, in view of Lewontin, by incorporating the connection-oriented initial request transmission in order to provide WAP push initiation independent of the mobile station information that is available to PPG.

The combined teachings of PUSHARCH, Lewontin and OTAHTTP do not disclose “transmitting Unstructured Supplementary Service Data (USSD)”. WAPU, however discloses “transmitting Unstructured Supplementary Service Data (USSD)” (e.g., **WAPU**: section 5.1, lines 4-9 of the 3rd paragraph). Nonetheless, USSD is a well-known bearer service that supports the WAP data traffic. It would have been obvious for one skilled in the art at the time of invention to combine the teachings of WAPU with

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PUSHARCH by including bearer services, such as USSD, in order to avoid the store-and-forward procedures and provide the capability for delivering high speed real-time services.

12. With respect to claim 29, the claim is substantially the same as claim 20 and therefore, it is rejected for the same reason as in claim 20 above.

13. With respect to claim 31, the claim is substantially the same as claim 20 and therefore, it is rejected for the same reason as in claim 20 above.

14. With respect to claim 23, PUSHARCH teaches wherein the initiation request comprises an identification of the bearer for activating to support the establishing of the push session (**PUSHARCH**: section 8.3, the 2nd and the 3rd paragraphs, and section 9.1, line 1 of the 2nd paragraph, described activating the bearer to support the establishing of the push session).

15. With respect to claim 26, PUSHARCH discloses wherein the initiation request conforms to a WAP protocol for Service Initiation Requests (SIRs) (**PUSHARCH**: section 6.1, including parsing of push content and addressing).

16. With respect to claim 27, the claims are rejected for the same reason as claim 6, 15 and 25 above. In addition, WAPU discloses wherein the initiation request conforms

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to a USSD protocol for Unstructured Supplementary Service Requests (USSRs)

(**WAPU**: sections 5.3.2.1 and 5.3.2.2 describe a USSD protocol where responses, viewed as USSR messages, are generated with respect to USSD requests.)

17. With respect to claim 28, Lewontin discloses a session oriented mechanism (**Lewontin**: [0040], lines 6-9 describes establishing the connection oriented push).

OTAHTTP discloses wherein the connection-oriented signalling channel transmits the initiation request using a session. (**OTAHTTP**: slide 4, bullet 3, indicates request, such as “SIR”, may be transmitted via connection-oriented push session).

18. Claims 2, 12, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **PUSHARCH**, in view of **Lewontin** and **OTAHTTP**, as applied to claims 1, 11 and 20 above, and further in view of *livari et al.* (US Pub. No. 2005/0020234 A1), and hereinafter **livari**.

19. With respect to claims 2, 12 and 21, **PUSHARCH** does not disclose wherein the activated bearer is a GPRS Packet Data Protocol Context. The combined teachings of **PUSHARCH**, **Lewontin** and **OTAHTTP** do not disclose wherein the activated bearer is a GPRS Packet Data Protocol Context.

In the same field of endeavor, *livari* discloses wherein the activated bearer is a GPRS Packet Data Protocol Context (**livari**: [0037], lines 1-4 and [0038], lines 1-6, wherein the “interface” of GGSN and SGSN are the active bearer).

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GPRS is used by the common mobile phone system GSM for transmitting IP packets with PDP context the data structure. It would have been obvious for one skilled in the art at the time of the invention to recognize the advantages of extending PUSHARCH, in view of Lewontin and OTAHTTP, by explicitly including GPRS PDP context as part of bearer services in order to leverage WAP service for broad GPRS-based mobile phone users.

20. Claims 5 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **PUSHARCH**, **Lewontin** and **OTAHTTP**, as applied to claims 1 and 20 above, in view of Push OTA Protocol (WAP-235-PUSHOTA-20010425-a), and hereinafter **PUSHOTA**. PUSHOTA is cited by applicants in IDS on 10/28/2004.

21. With respect to claim 5, PUSHARCH does not disclose providing an error message to the push proxy gateway immediately when said transmitting comprises failing to establish a session between the network and the mobile station using the connection-oriented signaling channel.

PUSHOTA, however discloses providing an error message to the push proxy gateway immediately when said transmitting comprises failing to establish a session between the network and the mobile station using the connection-oriented signaling channel (**PUSHOTA**: section 6.1.3.3 describes messages in the case of failure).

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It would have been obvious for one skilled in the art at the time of invention to combine the teachings of PUSHARCH and the teachings of PUSHOTA by including the error code in order to provide a reasonable level of tolerance for PUSHARCH.

22. With respect to claim 24, PUSHARCH does not disclose receiving an error message at the push proxy gateway immediately when said network fails to establish a session between the network and the mobile station using the connection-oriented signalling channel.

PUSHOTA, however discloses receiving an error message at the push proxy gateway immediately when said network fails to establish a session between the network and the mobile station using the connection-oriented signalling channel (**PUSHOTA**: section 6.1.3.3 describes messages in the case of failure).

It would have been obvious for one skilled in the art at the time of invention to combine the teachings of PUSHARCH and the teachings of PUSHOTA by including the error code in order to provide a level tolerance for PUSHARCH.

23. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over **PUSHARCH, Lewontin, OTAHTTP** and **WAPU**, as applied to claims 6, 8 above, and further in view of **livari**.

24. With respect to claim 9, the claim is rejected for the same reason as claim 8 above. In addition, PUSHARCH discloses establishing a connection with the mobile

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station using the channel for transmitting (**PUSHARCH**: section 8.3, lines 3-4 of the 1st paragraph), and requesting the mobile station to establish push session with the push proxy gateway (**PUSHARCH**: section 8.3, lines 2-3 of the 1st paragraph), and WAPU discloses transmitting USSD (e.g., **WAPU**: section 5.2.2, when USSD is used as a bearer as in WAPU: section 5.1, the last line), and sending a USSR message (e.g., **WAPU**: section 5.1, lines 4-6 of the 3rd paragraph and the last line, wherein the push proxy gateway is part of the network).

The combined teachings of PUSHARCH, Lewontin, OTAHTTP and WAPU do not disclose to activate a Packet Data Protocol (PDP) context.

In the same field of endeavor, livari discloses to activate a Packet Data Protocol (PDP) context (**livari**: [0037], lines 1-4) and establish a push session with the push proxy gateway (**livari**: [0038], lines 1-3).

GPRS is used by the common mobile phone system GSM for transmitting IP packets with PDP context the data structure. It would have been obvious for one skilled in the art at the time of the invention to recognize the advantages of extending teachings of PUSHARCH, Lewontin, OTAHTTP, and WAPU by explicitly including GPRS PDP context as part of bearer services in order to leverage WAP service for broad GPRS-based mobile phone users.

25. Claims 13 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **PUSHARCH**, in view of **Lewontin**, **OTAHTTP**, and **WAPU**, as applied to 20 above, and further in view of **PUSHOTA**.

26. With respect to claims 13 and 22, PUSHARCH discloses initiation request (**PUSHARCH**: e.g., section 6.3, lines 1-3). PUSHARCH, in view of WAPU, does not expressly disclose an identification of the push proxy gateway for establishing the push session in connection-oriented push.

PUSHOTA, however discloses wherein the initiation request comprises an identification of the push proxy gateway for establishing the push session (contact points as in **PUSHOTA**: section 6.1.4.5, the last two lines).

It would have been obvious for a skilled person in the art at the time of invention to combine the teachings of PUSHARCH and WAPU, with the teachings of PUSHOTA, because PUSHOTA extends PUSHARCH by providing detailed specifications of the connection-oriented push.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LI-WU CHANG whose telephone number is (571)270-3809. The examiner can normally be reached on Monday through Friday from 10AM to 5PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent can be reached on (571)2723080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Michael B. Holmes/
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